26 January 1973

MEMORANDUM

SUBJECT: Adelman on "Is the Oil Shortage Real" *

Professor Adelman's sketch of the international oil market is in some ways a verbal caricature. In broad outline the reader can recognize the essentials of the oil industry as it has existed in the past. But as with any caricaturist, Adelman has added interpretive flourishes of his own design which serve to distort reality and which may mislead.

It is perfectly true that there is plenty of oil in the ground and that -- in that sense -- the "energy shortage" is a fiction. At current rates of consumption proved reserves in the world today are large enough to last for the best part of a century and new reserves are certain to be found.

It is also true that the international oil industry is one of only a limited degree of competition -- the number of sellers of crude oil is small. In addition, these international oil companies who extract oil from concessions in the Persian Gulf, and also in other parts of the Middle East, Africa, Latin America, Europe, the US and the Far East are aptly termed "tax collecting" agencies, for they have paid for the privilege of exploiting oil deposits in taxes of increasing amounts as the years have passed.

But to claim that "some powerful force has overridden demand and supply" (p.72) or that demand and supply are irrelevant to the current and expected price of crude oil (p.77) is poor economics. The conclusion (p.93) that the balance-of-payments oil deficit can be abolished by getting US companies out of crude oil marketing is therefore misled and dangerously misleading.

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* *M. A. Adelman "Is the Oil Shortage Real", Foreign Affairs, Number 9, Winter 1972-73, pp 69-107.*

An analysis of the forces affecting the price of crude oil lies at the heart of Adelman's argument. He claims that because incremental cost -- the basic determinant of supply -- is a negligible part of the crude oil price, supply and demand are not useful in explaining the oil industry. "All that matters is whether monopoly will flourish or fade" (p.77). Producing nations are able to maintain a monopoly (OPEC) and get a high price for their crude only by using the international oil companies. If producing countries were to market crude themselves, the price would crumble to a floor of bare cost, not cost-plus-taxes which is the floor of the companies. The hope of greater profits on increased sales and the knowledge that large buyers have an incentive to search for a better price means that a seller would have to reduce his price before his rivals tied up a good customer. (p.94) If the country were marketing its own crude, it could afford to lower price to the level of bare cost.

Historically the world price of crude has never settled at as low a level as its incremental cost in the Persian Gulf because the oil industry started in the US where costs are higher. Both because of a head start and because the US market as it has developed has made up the bulk of the world market for oil, incremental cost in the US became the effective floor price. US companies originally sought out Near Eastern oil because its cost was lower. They could afford to pay a price -- taxes -- for the right to extract Gulf oil up to the difference between the Gulf cost and the US cost.

Economic texts tell us that when competition is limited to a small number of buyers and sellers ("oligopoly") the price of a commodity will be higher or lower depending on the bargaining strength of each group. The price of OPEC crude has been held down until recently because of the superior bargaining position of the international companies. As long as considerable excess crude producing capacity existed in the US (as it did until the early 1960's), the OPEC countries were not able to raise the price of their crude to the level of the US cost. When with rising oil demand that excess capacity disappeared, OPEC oil could no longer be replaced from US sources and bargaining strength shifted to the countries. They are now, through higher taxes, fees, "participation" and such devices, in the process of raising their take to the limit.

The limit is no longer incremental cost in the US because US crude oil output has passed its peak. The limit now has risen to the cost of alternative energy sources such as shale oil or nuclear energy. It has been estimated that shale oil could be extracted in the US for about $5 a barrel. Thus the limit to taxes and fees which the Gulf countries can get for each barrel of oil produced from their land -- by themselves or some concessioner -- is the difference between bare cost of 15 to 20 cents and $5 a barrel.

OPEC is served by competent economists who recognize that the market value of a resource which exists in limited supply rises with demand.* Thus even if OPEC should fail to act as a monopolist, rising demand would force the price of OPEC oil up. Someone would always be willing to offer more money for the right to extract it, so long as cost plus taxes paid for OPEC oil is less than the cost of the next best alternative -- now probably shale oil.

Lest this all sound drearily academic and apart from reality, it is worth adding that people with long experience in the international oil industry confirm that OPEC countries do behave in just this fashion. Arab governments in their tax demands on the companies judge what the market will bear by looking at the costs of alternative energy supplies -- and cite them to the company representatives.

In brief Adelman has seriously neglected the role of increasing world demand for oil. He also -- and perhaps consequently -- has used both the wrong model and the wrong data. He has used a competitive model and incremental cost from the Gulf. When one is interested in the world oil market one must recognize the facts of the limited numbers of buyers and sellers of crude (a model of oligopoly) and the cost of the next best world-wide alternative. But -- perhaps his worst sin of all -- Adelman has assumed that Arabs are stupid. Those who control OPEC have shown every evidence of the opposite.

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* *This principle was first enunciated more than a century ago by David Ricardo, an early English economist, testifying before the Parliament. The British were having problems with inflation even then and were especially exercised over rising food prices. Many critics had claimed that landlords were to blame for it all because they were charging exorbitant rents for the use of their land. Ricardo in his testimony commented "Corn is not dear because rent is paid; rather rent is paid because corn is dear." We could paraphrase and say "Oil is not high because taxes are paid; rather taxes are paid because oil is high."*